



PROJECT REF: P2970

APPENDIX 8.5

PINE MARTEN SURVEY CAVAN

REGIONAL SPORTS CAMPUS

CLIENT: MCADAM DESIGN

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1.0 INTRODUCTION

MCL Consulting Ltd (MCL) was appointed by McAdam Design on behalf of Cavan County Council to undertake a pine marten survey for a proposed development of a sports campus to be located on lands north, south and west of Royal School Cavan and west of Breffni Park GAA grounds, County Cavan.

1.1 Site Description

The proposed project relates to circa 28ha situated to the Southwest of Cavan Town, located between Kingspan Breffni Park and the Royal School, Cavan. The site incorporates existing sporting facilities used by the Royal School for physical education; this including one shale gravel hockey pitch and adjoining soccer field. The remainder of the school lands are undeveloped. The site also includes lands to the southwest of Breffni Park. A site location map is presented in Figure 1.



Figure 1: Site Location



Figure 2: Red Line Boundary

1.2 Development Proposals

The development comprises the following components:-

- Indoor sports complex to include sports halls with spectator seating, fitness studios, changing facilities, reception, café and ancillary accommodation.
- 7 no. outdoor sports pitches.
- Covered sports arena with playing pitch, spectator seating and other ancillary accommodation.
- Ancillary sporting facilities include 8 lane athletics track and cricket practice nets.
- New vehicular access / junction and closure of Park Lane/Dublin vehicular junction, relocation of existing Breffni Park turnstiles to facilitate reconfiguration of Park Lane, bridge structure, internal roads, cycle/pedestrian paths, associated car/bus/cycle parking, electric charge points and streetlighting.

-
- Pedestrian access points of Kilnavara Lane and Dublin Road.
 - Hard and soft landscaping including acoustic fencing, wildlife habitat area/corridors, artificial badger-sett, walking trails and other ancillary works such as spectator stands, retaining walls, fencing and ball stop fencing, team shelters, toilet block, floodlighting, signage, drainage infrastructure including attenuation tanks, SuDs and culverting of a minor watercourse, storage space, ESB Substation, ancillary accommodation and all associated site works to accommodate the development.
 - The proposed bridge is a single span integral reinforced concrete bridge, supported on piled foundations.

1.3 Consultation

Consultation was carried out with Paul O’Doherty (Conservation Ranger), Chris Liu (Conservation Ranger) and Dr. Maurice Evans (Divisional Manager) of the National Parks and Wildlife Service (NPWS). A site meeting was attended by MCL Consulting, representatives from NPWS, McAdam Design and Cavan County Council on 15th February 2024. All relevant information has been integrated into this report and appendices.

1.4 Aims and Objectives

- Desk study to assess previous records of pine marten, suitable habitat on site and surrounding area
- X4 Transect walkovers and mapping of target notes using a handheld Garmin Etrex 22X to indicate field signs or den sites within 250m of the development
- Mapping and collation of photographs for identified features including mature trees, squirrel dreys, bird nests, windthrow and up-turned root plates, rock faces, burrows, and buildings
- Identification of any pine marten activity to include scats, footprints, and trails
- Habitat appraisal between high / low value foraging and denning woodland blocks
- Recommendations for mitigation, and compensation measures
- Protection of pine marten throughout the construction and operational phase
- Details of all proposed hedgerow / scrub clearance activities and timing

2.0 SURVEYORS/AUTHORS

MCL Consulting is a Northern Ireland based multidisciplinary environmental consultancy which provides expert advice for a wide range of ecological services in support of Environmental Impact Assessments (EIA).

Ryan Boyle BSc MSc – Principal Ecologist

Field work was carried out by Ryan Boyle who was principal ecologist at MCL Consulting. Ryan has a MSc in Ecological Management and Conservation Biology from Queens University Belfast and a BSc (Hons) in Bioveterinary Sciences from Harper Adams University. He has 8 years of professional and voluntary experience in the ecological, environmental and conservation sector having worked as a herpetological keeper at Chester Zoo working on conservation breeding programmes with the aim of wild reintroductions, a zookeeper at Belfast Zoo, environmental assistant at GRAHAM, volunteered with the Belfast Hills Partnership partaking in a number of surveys such as bats, phase 1 habitat surveys, preliminary ecological appraisals, environmental farming schemes, soil carbon surveys, river fly surveys and is the chair for the Northern Ireland Amphibian and Reptile Group. He is experienced in species identification, management and mitigation, badger surveys, otter surveys bat activity surveys, preliminary ecological appraisals, biodiversity checklists, bat roost potential surveys, newt surveys, breeding bird surveys, vantage point surveys as well as in-depth research desk studies to generate informative conclusions based upon historical data with experience in applying these skills to development industries.

Emily Taylor BSc MSc –Senior Ecologist

Field work was carried out by Emily Taylor, a graduate ecologist at MCL Consulting. She has an MSc in Ecological Management and Conservation Biology from Queen's University Belfast and has a BSc (Hons) in Biological Sciences from Durham University. She has a range of experience in ecological field skills, having undertaken placements with both the RSPB and the Armagh, Banbridge and Craigavon Borough Council's biodiversity department. She is a current regional surveyor for the Northern Ireland Amphibian and Reptile Group, a seasonal volunteer for the Bat Conservation Trust and a member of the Botanical Society of Britain and Ireland. She has regular experience in conducting biodiversity checklists, extended phase 1 habitat surveys, bat roost potential surveys, bat activity surveys and breeding bird surveys. She also has experience in surveying for otters, badgers, lizards and newts. She is a qualified

tree climber, with a LANTRA qualification in tree access using a rope and harness and aerial rescue and has completed both Construction Site Register (CSR) and Personal Track Safety (PTS) training.

Peter McKnight BSc MSc – Consultant Ecologist

Field work was carried out by Peter McKnight, a consultant ecologist at MCL Consulting. He graduated from Queen’s University Belfast with a bachelor's degree (BSc) in Planning, Environment and Development as well as a master's degree (MSc) in Ecological Management and Conservation Biology. He has previous employment experience with EcoSeeds where he would assist in the growing, cleaning and distribution of wildflower seeds including hydroseeding. He also worked for Ulster Wildlife as a Nature Reserve Assistant, treating invasive species and managing the bespoke needs of nature reserves across Northern Ireland including scrub removal, path/fence maintenance and botanical surveys. During this job he obtained LANTRA certification in the Safe Use of Pesticides, Brushcutters and Woodchippers as well as a Rescue Emergency Care certificate in Essential First Aid for the Outdoors including Emergency First Aid at Work. During his BSc, he went to Peru with Operation Wallacea to the Amazon Rainforest for 4 weeks, surveying varying tropical species including fishing bats, caiman and tropical birds. He also holds a Construction Skills Register (CSR) card.

Zachary Rose BSc MSc – Consultant Ecologist

Field work and reporting was carried out by Zachary Rose, a consultant ecologist at MCL Consulting. He has an MSc in Ecological Management and Conservation Biology as well as a BSc (Hons) in Zoology both from Queen’s University Belfast. He has 3 years of experience volunteering with Ulster Wildlife, treating invasives, maintaining nature reserves and helping with the native oyster project at Bangor marina. During his time at Ulster Wildlife, he completed weeklong hedgehog surveys in the summer of 2021 and 2022 as well as gaining a LANTRA certification in the safe use of pesticides. He has 2 years of experience working for the consultancy company Tetra Tech as a seasonal field ecologist. During this time, he led several emergence and re-entry bat surveys alongside completing otter, badger, hare and smooth newt surveys. He also gained experience doing video analysis and writing PEA reports during this time. He has also led several guided bat walk and talk evenings for Newtownards Community group in the summer of 2022 and summer 2023. He also holds a Construction Skills Register (CSR) card.

Amy Skuce BSc (Hons) MCIEM – Principal Ecologist

Reporting was carried out by Amy Skuce, a Principal Ecologist at MCL Consulting. She has a BSc (Hons) in Countryside and Environmental Management from Harper Adams University and is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). She has nine years of experience as a professional ecologist undertaking extensive survey work as well as designing appropriate mitigation for a range of schemes. Amy holds a Level 4 Field Identification Skills Certificate (FISC) and is an experienced botanical surveyor and is proficient in extended phase one habitat surveys, UKHABs and Biodiversity Net Gain assessments as well as National Vegetation Classification (NVC) surveys. She also has experience in undertaking bat roost potential surveys, bat activity surveys, badger surveys as well as a range of riparian mammal and herptile surveys.

3.0 LEGISLATION, POLICY AND GUIDELINES

Pine Marten

This report takes into account the following legislative protections in relation to Pine Marten: Wildlife Acts 1976-2012 (as amended) and Wildlife (Amendment) Act 2000 and EU Habitats Directive 92/43/EEC.

Under this legislation it is an offence to:

- Intentionally or recklessly kill, injure, or take a pine marten; or
- Intentionally or recklessly damage or destroy, or obstruct access to, any structure or place that pine martens use for shelter or protection; or
- Intentionally or recklessly damages or destroys anything which conceals or protects any such structure; or
- Intentionally or recklessly disturbs a pine marten while it is occupying a structure or place which it uses for shelter or protection.
- In addition, any person who knowingly causes or permits to be done an act which is made unlawful by any of these provisions shall also be guilty of an offence.
- In addition, any person who knowingly causes or permits to be done an act which is made unlawful by any of these provisions shall also be guilty of an offence. There is no provision within the legislation to issue licenses to kill pine marten for the purpose of development.

Reference is made where relevant to local and national policy documents such as:

- National Biodiversity Action Plan, 4th Edition (2024).
- Cavan Town and Environs Development Plan (2014-2020)
- Cavan Town and Environs Development Plan Draft (2022)

4.0 METHODOLOGY

4.1 Desk Study

A desk study was undertaken to determine if any priority species were recorded within proximity to the site. This involved using digital GIS datasets as well as contacting local recording groups for relevant information.

The data sources for the desk study were:

- NPWS Natural Environment Map Viewer
- Relevant NGO Websites
- National Parks & Wildlife Service (NPWS) records requested 29th April 2023
- NBN Atlas

4.2 Field Study

Site walkovers were undertaken by MCL ecologists in May 2022 to identify evidence of recent and historic pine marten activity. Table 1 below summarizes the survey timings and the weather conditions at the time of survey.

Table 1: Survey timing and conditions

Surveyors	Date	Start Time	Finish time	Temp. (°C)	Wind (km/h)	Oktas	Pp. (%)
Ryan Boyle BSc (Hons) MSc	29/04/2023	11:30	14:30	11	28	0/8	0
	21/06/2023	07:30	10:30	12	9	8/8	0
	22/07/2023	08:30	10:30	14	9	6/8	30
	26/08/2023	09:00	12:00	11	11	5/8	25
Peter McKnight BSc (Hons) MSc	29/11/2023	11:10	15:00	2	2	5/8	10

Transects (Appendices IV), where possible, were located along the riparian woodland areas and along linear habitat features. Transects were walked slowly with any prominent features searched were applicable. Particular attention was given to track intersections, stream crossings, prominent rocks, and tree stumps etc. as these are preferred scating points. The proximity of scats to mammal tracks and foraging signs was also noted.

Any identified den structures were photographed, and the location recorded using handheld Garmin Etrex 22X survey equipment. Table 2 denotes the various field signs that could be expected within an active site.

Table 2: Pine Marten Field Signs

Field signs	Criteria
Dens	Pine marten dens can occur within features within mature trees, squirrel dreys, bird nests, windthrow and up-turned root plates, rock faces, burrows, and buildings
Footprints	Footprints can be found near the dens or along trails and will display 5 toes around 5 – 6cm in size
Scat	Can be found near a den or mark a pine marten's territory and are usually dark and coiled and often contain lots of berries and / or hair and bone with a distinct sweet smell
Paths	Well-worn paths created by pine martens on route to dens or foraging areas.

5.0 SURVEY RESULTS

5.1 Desk study

A total of 5 pine marten records were identified within 2km of the site, the most recent from 2007. It was also reported anecdotally from the Royal School groundskeeper that pine marten are present locally/onsite.

Table 3: Summary of NPWS results

Grid Ref	Scientific name	Common name	Date
H30	<i>Martes martes</i>	Pine Marten	2006
H30	<i>Martes martes</i>	Pine Marten	2007
H40	<i>Martes martes</i>	Pine Marten	2007
H40	<i>Martes martes</i>	Pine Marten	2007
H40	<i>Martes martes</i>	Pine Marten	2007

5.2 Field Survey

During the initial walkover survey areas of riparian and immature woodland were recorded as being suitable habitat for pine marten. Riparian woodland was located in the east of the site, alongside the Cavan River. Species composition for this habitat consisted primarily of hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*), grey willow (*Salix cinerea*), goat willow (*Salix caprea*) and some beech (*Fagus sylvatica*) specimens were also identified.

Immature woodland was situated in the north eastern corner of the site. The habitat type is located on a steep bank leading down to the site and school access lane and bordering a neighbouring sports pitch. Species composition consisted of ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*) and alder (*Alnus glutinosa*). Areas of scrub, hedgerow and treeline also of suitability for pine marten were located throughout the site. Following the initial site walkover the areas of woodland, scrub and hedgerows were targeted for further survey effort and periods of remote camera monitoring.

A survey for potential den sites and scats was undertaken in suitable habitat zones. Surveyors looked for scats, footprints, suitable den sites and direct sightings of pine marten.

Both woodland blocks were considered to be well connected and provide a rich source of fruit bearing trees, thus providing a good foraging resource for pine marten, with mature trees proving suitable den sites.

Remote camera monitoring was undertaken at 5 locations during 23rd May 2023- 20th June and 17th November 2023- 14th December 2023.

Pine marten scat was recorded, and a total of 1 adult and 4 kits being recorded on camera monitoring.



Figure 3: Pine marten onsite



Figure 4: Pine Marten adjacent River Cavan



Figure 5: Pine Marten with prey

6.0 ASSESSMENT AND RECOMMENDATIONS

This pine marten survey determined that pine martens are active within the site. However no confirmed dens were identified. The presence of young kits on the camera trap indicates that a breeding den is onsite or in the nearby vicinity. While adult pine marten can range on average 7km per night this range is likely reduced for a mother with kits.

There are a range of trees onsite which could provide suitable den habitat, however no confirmed den has been identified at this stage. A number of suitable trees and buildings are also present offsite in the immediate vicinity, in the Royal School grounds and buildings adjacent the offsite river corridor.

As such, a precautionary approach is recommended, and it is to be assumed that a den is present onsite. The riparian corridor provides suitable foraging and commuting habitat with pine marten being recorded using this area.

The proposed development has been designed in close liaison with the ecology team and mitigation for pine marten has been built into the site design. The majority of the site works are proposed in habitats of limited suitability for pine marten (open pasture). Boundary vegetation is to be retained, including areas of woodland where the pine marten were frequently recorded. Pine marten were also recorded along the Cavan River and a riparian buffer is being maintained from this habitat. However, in the northernmost block of woodland, proposals for a pedestrian pathway will require some isolated tree felling and low-level artificial lighting.

As such without mitigation there are construction phase risks of:

- damage of or disturbance to resting sites;
- loss of commuting or foraging habitat;
- direct mortality

and operational phase risks of:

- Lighting
- Recreational disturbance

6.1 Mitigation Measures

6.1.1 Construction phase

An ecological clerk of works (ECoW) should be appointed prior to commencement of onsite works. Any tree felling will be carried out by experienced contractors to reduce direct mortality of protected species according to agreed felling methods between contractors and the ECoW. A full tree felling list/plan is to be provided and where trees are considered to be at risk of containing pine marten dens and those within a 30m buffer, a pre felling aerial inspection (under appropriate licence from NPWS) is to be undertaken.

Where active dens are identified removal will require a derogation licence from NPWS, incorporating provision of a replacement habitat box. Where a breeding den is identified a 100m works exclusion buffer must be maintained throughout the active breeding period (March-June).

During the construction phase, general management and protection measures should be implemented prior to works commencing on site, these include:

- The use of noisy machinery should cease at least 2 hours before sunset
- Security lighting should be directed away from identified mammal trails and denning sites
- An adequate supply of water should be made available on site for effective dust suppression
- Any exposed open pipe systems must be capped to prevent pine marten access
- No excavations are to be left uncovered or without a means of egress (a sloped plank for example) overnight, as pine martens may fall in or enter in search of food and become trapped
- No buildings or storage units are to be left open overnight, as pine martens may enter and become trapped
- No poisonous or potentially harmful substances or materials are to be left unsecured overnight
- Chemicals should be stored as far from identified mammal trails and denning sites as possible, i.e. within the western section of the site
- Special care should be given to protect water sources, as these are likely to be utilized by pine martens.

6.1.2 Operational Phase Mitigation

A pathway is proposed in the north eastern corner, which for safety reasons requires some level of artificial lighting. Due to the presence of pine marten and other nocturnal fauna in this area it is proposed that waist high bollards are utilised. Current lighting plans (9955-JCP-ZZ-00-DR-E-6301) show use of bollards which are “dark sky” approved. No lighting is proposed within the riparian woodland zone.

Details of further lighting within the site have not yet been provided and in the absence of specific Pine Marten lighting guidance, sensitive lighting on site should follow the guidance set out in Bats and Lighting in the UK (BCT and ILP, 2018). Therefore, associated site lighting proposals must consider the following:

- Avoid lighting in riparian woodland areas
- Install lamps and the lowest permissible density; (waist high bollards)
- Lamps should be positioned to direct light to avoid upward spill onto any green corridors that could be used by commuting pine marten or features with den potential;
- LED lighting – with no/low UV component is recommended;
- Lights with a warm colour temperature – 3000K or 2700K have significantly less impact on nocturnal fauna;
- Light sources that peak higher than 550nm also reduce impacts to bats; and
- The use of timers and dimmers to avoid lighting areas of the site all night is recommended.

Recreational disturbance impacts should be lessened by design of the pathways, provision of signage and suitable planting to encourage walkers to stay on pathways.

Pine marten are generally nocturnal and as such the proposed operating hours will also mitigate for disturbance. No pathways are to be provided in the riparian woodland corridor or habitat compensation areas, limiting public access to these zones. Signage should be provided on pathways encouraging people to stick to the route and not to trample vegetation. Allowing dense shrub vegetation to establish adjacent to the pathways (native species without spines such as dogwood, hazel and elder are suitable) is recommended as a low intervention way to restrict public access beyond the provided footways.

As part of the general acoustic mitigation for the development, it is envisaged that acoustic fencing will be required on the western side of the proposed pitches. This will be a minimum of 3m in height and is required to be full, closed board fencing. Where this fencing is proposed and considered to form a barrier to dispersal for pine marten and other mammals there will be a requirement for mammal passes to be installed at the base of the fence and should have a width of approximately 300m. This will allow ongoing commuting links for onsite pine marten, whilst still providing required acoustic mitigation.

6.1.3 Habitat compensation

Details of the proposed habitat compensation are shown in Appendix 2. A detailed habitat and biodiversity management plan should be produced giving full details on planting schemes and ongoing management of this area however a summary of recommendations is given below.

Any tree removal should be replaced with like for like planting on a minimum of 2:1, to ensure no long-term loss of suitable habitat. Extensive tree planting, utilising a range of native species, is proposed throughout the site, and will be focused on the boundary wildlife corridors, maintaining the current north-south commuting link for this species. This should aim to provide a continuous cover woodland with diverse structure of value to pine marten, utilising a mixture of coniferous and broadleaved species. Any deadwood present in the woodland should be retained. Planting of fruiting tree species, particularly rowan, wild plum and bird cherry, and hazel along the riparian habitat boundaries is recommended. This will encourage small mammal populations and therefore improve the existing foraging potential on site for pine marten.

In order to increase the suitable breeding habitat onsite, artificial den boxes should be provided within the retained riparian woodland habitat to the east of the Cavan River. These boxes should meet the specification set out within the Vincent Wildlife Trust advice note (2014) and be situated on suitable mature trees at a height of c.4m. This area of woodland is isolated from the proposed development and will have lower levels of disturbance.

7.0 CONCLUSION

Overall, moderate levels of pine marten activity were identified onsite, with scats recorded as well as recording of adult pine marten with kits via remote camera monitoring.

No dens or nest boxes were identified onsite however given the activity levels it is considered possible that a den is located within the riparian woodland corridor adjacent the Cavan River or in close proximity to the site.

Due to sensitive site design, the majority of onsite habitat provision is to be retained, with some enhancements proposed. Construction phase mitigation including supervision by ECOW, licenced survey of trees prior to felling where required and adhering to best practices in relation to transient mammals is recommended. Operational phase mitigation including site sensitive lighting and measures to restrict public access to key habitat areas should be implemented.

Provided the detailed mitigation is followed the proposals are considered to have negligible impact on the local pine marten population in the long term.

Report Prepared By: -



Amy Skuce BSc (Hons), MCIEM
Principal Ecologist

Reviewed By: -



Emily Taylor (Hons), MSc
Senior Ecologist

8.0 REFERENCES

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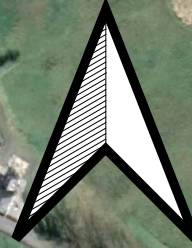
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APPENDICES



Legend

-  Species Sightings
-  Site Boundary



Camera Sightings

Created by: Peter McKnight

Reviewed by: Amy Skuce

Client: McAdam Design

Scale: 4000 @ A3

Date: 22/02/2024



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LEGEND:

- Existing trees / hedges to be retained in accordance with BS 5837:2012 and best arboricultural practice at the time of execution of the works. Blue line denotes Root Protection Area (RPA). Remedial surgery as Arboriculturalist's recommendations.
- Existing trees to be removed for Health & Safety reasons or to facilitate development.
- Existing hedges/scrub vegetation to be removed to facilitate development. Note: See below where this vegetation to be translocated into wildlife area.
- Proposed extra heavy standard / semi mature specimen tree planting. Note: See below for suggested species / location & specification.
- Proposed hedge planting of mixed evergreen and deciduous species for biodiversity & seasonal effect with bark mulch. Note: See below for suggested species / location & specification.
- Proposed woodland planted areas of mixed evergreen and deciduous species for biodiversity & seasonal effect. Note: See below for suggested species / location & specification.
- Proposed wildlife compensation area of mixed evergreen and deciduous species for biodiversity & seasonal effect. Note: See below for suggested species / location & specification.
- Proposed amenity planting to Main Entrance / Plaza, Car Park Areas of mixed evergreen and deciduous species for biodiversity & seasonal effect. Note: See below for suggested species / location & specification.
- Proposed grass seeded areas. Species as recommended by Sports Turf Specialist.
- Proposed species rich grass seeded areas. Species of local provenance & as recommended by Ecologist.
- Proposed damp meadow / riparian grass seeded areas. Species of local provenance & as recommended by Ecologist.
- Proposed translocated hedge / scrub material, along margins of wildlife compensation area as recommended by the Ecologist. Areas to be kept irrigated until established as directed by the Ecologist.

Suggested Species, Specification & Planting Requirements:

Proposed Extra Heavy Standard / Semi Mature Specimen Tree Planting:

- Suggested Species: Wetter areas.
 - Alnus glutinosa (Alder)
 - Salix species (Willow)
- Suggested Species: Drier areas.
 - Malus sylvestris (Crab apple)
 - Quercus robur (Oak)
 - Betula pendula (Silver birch)

- Specification: Extra Heavy Standard size 16-18 cms girth; 450cms minimum height; 200cms minimum clear stem; 3 x transplanted; container grown, & Semi Mature size 20-25 cms girth; 500 - 550cms minimum height; 250cms minimum clear stem; 3 x transplanted; container grown.
- Planting: Extra Heavy Standard & Semi Mature trees to be planted in free draining topsoil plus 1500mm dia x 750mm deep with 75mm deep medium grade ornamental composted surface bark mulch, laid in accordance with specification.

Proposed Hedge Planting:

- Mixed evergreen and deciduous species for biodiversity & seasonal effect with 75mm deep medium grade ornamental composted surface bark mulch, laid in accordance with specification.
- Suggested Species:
 - Crataegus monogyna (Hawthorn)
 - Rosa canina (Dog rose)
 - Rubus fruticosus (Bramble)
 - Prunus spinosa (Blackthorn)
 - Viburnum opulus (Guelder rose)
 - Ilex aquifolium (Holly)
 - Euonymus europaeus (Spindle)

Proposed Woodland Planting:

- Areas of mixed evergreen and deciduous species for biodiversity & seasonal effect.
- Suggested species:
 - Betula pubescens (Downy Birch)
 - Crataegus monogyna (Hawthorn)
 - Corylus avellana (Hazel)
 - Ilex aquifolium (Holly)
 - Viburnum opulus (Guelder Rose)
 - Prunus padus (Bird Cherry)
 - Prunus avium (Wild Cherry)
 - Quercus robur (Oak)
 - Sorbus aucuparia (Mountain Ash)

Wildlife Compensation Area:

- Suggested species:
 - Sambucus nigra (Elder)
 - Sorbus aucuparia (Rowan)
 - Corylus avellana (Hazel)
 - Prunus avium (Wild Cherry)
 - Prunus padus (Bird Cherry)
 - Salix caprea (Pussy willow)
 - Salix cinerea (Grey willow)

Proposed Amenity Planting to Main Entrance / Plaza, Car Park Areas:

- Specification: Plants to be between 20cm & 120cm in height, container grown in pot sizes ranging from 18l to 108l.
- Planting: Amenity planted areas to have 300mm min depth good quality free draining topsoil with soil ameliorants and slow release fertiliser. Plants to be planted at between 250mm & 1000mm centres depending on species.
- Suggested species (Pollinator Friendly):
 - Cornus sanguinea 'Midwinter Fire' (Dogwood)
 - Viburnum tinus 'Eve Price' (Laurustinus)
 - Skimmia (Japanese Skimmia)
 - Verbena bonariensis (Tall Verbena)
 - Lavandula hidcote (English Lavender)
 - Miscanthus sinensis 'Neine silberspinne' (Silver Grass)

Grass Seeded Areas:

- Suggested species:
 - Hard wearing, as recommended by Sports Turf Specialist.
- Specification: All grass seeded areas to be seeded over, 50mm - 150mm depth topsoil, or as recommended by Sports Turf Specialist.

Species Rich Grass Seeded Areas:

- Suggested species:
 - Species of local provenance & as recommended by Ecologist.
- Specification: All species rich grass areas to be seeded over, 50mm - 150mm depth topsoil.

Damp Meadow / Riparian Grass Seeded Areas:

- 10m wide margin to Cavan River and wetland scrapes in wildlife compensation area.
- Suggested species:
 - Species of local provenance & as recommended by Ecologist.
- Specification: All species rich grass areas to be seeded over, 50mm - 150mm depth topsoil.

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- NOTES:
- Do not scale off this drawing.
 - Drawings to be read in conjunction with the specification and all relevant drawing information.
 - Contractor to check all dimensions on site. Milwaine Landscape Architects to be advised of any discrepancies between this drawing and site conditions immediately.
 - Dimensions are in millimetres unless otherwise stated.
- This drawing has been produced for the client for the project on the site shown. It was prepared for a particular project with the client and will have a commensurate degree of accuracy. It is not a "total drawing". This drawing is not intended for use by any other person for any other purpose than that specified here. Milwaine Landscape Architects accept no liability whatsoever if this drawing is used by any other person or for any other purpose.
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SITE LAYOUT & LANDSCAPE PLAN, SCALE 1:1000 @ A0

MAIN ENTRANCE / PLAZA, SCALE 1:250 @ A0

Rev: _____ Date: _____

MILWAINE LANDSCAPE ARCHITECTS

PROJECT:
Cavan County Council
Cavan Regional Sports Campus
DRAWING TITLE:
Site Layout & Landscape Plan

Status	Stage 1
Scale	As shown
Drawn	JAM
Checked	BMd
Date	07.03.24
Project No.	2320
Drawing No.	CSC-MLA-XX-00-DR-L-2001

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