Chapter 11:

Material Assets

11.0 MATERIAL ASSETS

11.1 INTRODUCTION

John Spain Associates, Chartered Planners and Development Consultants, undertook the preparation of this section of the Environmental Impact Assessment Report (EIAR), in association with MCORM Architects, JOR Consulting Engineers and McElligott Consulting Engineers (see Chapter 1 and accompanying application documentation for further details). Paul Turley, BA, MRUP, Dip Environmental & Planning Law, MIPI, Executive Director with John Spain Associates, is the principle author of this chapter.

Resources that are valued and that are intrinsic to specific places are called 'material assets'. They may be of either human or natural origin and the value may arise for either economic or cultural reasons. The assessment objectives vary considerably according to the type of assets, those for economic assets being concerned primarily with ensuring equitable and sustainable use of resources. Assessments of cultural assets are more typically concerned with securing the integrity and continuity of both the asset and its necessary context.

The EIA Directive requires that Architectural and Archaeological Heritage (Cultural Heritage) is assessed as part of Material Assets. However, such is the importance of this issue in Ireland, EIA best practice has established that it is important to address this issue separately and not as an adjunct to the Material Assets section in the EIAR document. Accordingly, Archaeology and Cultural Heritage is assessed in Chapter 4 of this EIAR document.

This chapter considers physical resources in the environment which may be of human origin, as those of a natural origin are addressed elsewhere in the EIAR. The objective of the assessment is to ensure that these assets are used in a sustainable manner, so that they will be available for future generations, after the delivery of the proposed development.

With regard to Material Assets, the August 2017 Draft EIAR Guidelines published by the EPA state:

"The meaning of this factor is less clear than others. In Directive 2011/92/EU it included architectural and archaeological heritage. Directive 2014/52/EU includes those heritage aspects as components of cultural heritage. Material assets can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes roads infrastructure. Sealing of agricultural land and effects on mining or quarrying potential come under the factors of land and soils."

The 2017 European Commission Guidance on the preparation of EIARs note that Material Assets are one of the items required to be addressed within an EIAR having regard to the 2014 Directive.

11.2 STUDY METHODOLOGY

This chapter of the EIAR document has been prepared with reference to EIA Directive 2014/52/EU and the Draft EPA guidelines published thereon in 2017, which will be updated upon the enactment of the directive into national law, a step which is required due to Ireland's dualist legal system. This chapter has also been prepared in accordance with the 2017 European Commission guidance on EIAR (2017) and the 2018 EIA Guidelines published by the Department of Housing, Planning, and Local Government.

The EPA draft guidelines include information on the assessment of the effects of development on material assets, and advises on the nature of the material assets which should be examined as part of the preparation of an EIAR. The following Material Assets are assessed in this Chapter of the EIAR Document:

- Economic Assets of Natural Origin
- Economic Assets of Human Origin

Economic assets of natural origin, which include biodiversity, land & soil and water, are addressed elsewhere in this EIAR, in particular Chapter 5, 7 and 8 respectively. As noted in Section 11.1 above, Cultural Assets of a Physical Type and Cultural Heritage of a Social Type are addressed in Chapters 4 of this EIAR Document.

Economic assets of human origin are considered in this chapter. A desktop study was carried out on existing material assets of human origin associated with the site of the proposed development. Projections of resource use were undertaken for both the construction and operational phases of the proposed development, and the impacts assessed. Mitigation measures are proposed where appropriate.

11.3 EXISTING RECEIVING ENVIRONMENT

11.3.1 Introduction

In describing the receiving environment, the context, character, significance and sensitivity of the baseline receiving environment into which the proposed development will fit is assessed. This takes account of any other proposed developments in the area that are also likely to proceed in the short to medium term.

11.3.2 Economic Assets of a Human Origin

This sub-section considers the key aspects relating to material assets of the proposed development site and the surrounding area, namely urban settlements, ownership and access, traffic infrastructure, potable water supply, wastewater discharge, electricity supply, gas supply, telecoms and municipal waste.

The following aspects of the proposed development will affect material assets within the vicinity of the proposed development site:

- Urban Settlements
- Ownership & Access
- Transport Infrastructure (please also refer to the Traffic and Transport Assessment submitted with this application)
- Foul Water Disposal (also see Chapter 8)
- Potable Water Supply (also see Chapter 8)
- Surface Water Disposal (also see Chapter 8)
- Natural Gas Supply
- Electrical Supply
- Telecoms; and
- Municipal Waste

Urban Settlements

The subject lands are currently undeveloped and comprise a green-field site, which is zoned primarily for residential development under the Meath County Development Plan 2013-2019. A portion of the lands are also zoned for open space use and there is an objective on the subject site for the provision of a Neighbourhood Centre.

This application relates to a site of 28.3 hectares, which is located on the edge of the town of Dunshaughlin and is contiguous to the built up area of the town.

The proposed development will integrate fully with the surrounding area and the adjacent developments and is considered an appropriate form of development on the subject site which is currently underutilised.

Ownership & Access

The lands comprising of the planning application site are part-owned by the applicant, Rockture 1 Limited. Further elements of the site are owned by associated companies Rockture 2 and Rockture 3 Limited, from which letters of consent have been obtained, which are submitted as part of the SHD application. The red line boundary of the proposed development also takes in lands under the control of the Local Authority (proposed pedestrian crossing on the Dublin Road and western edge of future playing pitches where a section of the Dunshaughlin Outer Relief Road (DORR) is proposed which is subject to a long term lease by the Dunshaughlin Youths Football Club), John Wogan (lands associated with the delivery of the DORR) and Eastwise Homes Limited (pedestrian and cycle link with the residential development to the north). Letters of consent from each of these landowners / leaseholders are submitted along with the application.

Vehicular access and egress to and from the application site will be provided via access points off the proposed section of the Dunshaughlin Outer Relief Road (DORR) to be delivered with this application, which links to the R147 via an existing permitted entrance junction and road serving Phase 1A, B and C, partially completed / under construction to the south. The DORR will also provide access to the future playing pitches to be developed by the Dunshaughlin Youths FootbalL Club, through a long term lease agreement with Local Authority, to the east of the subject site (these lands were transferred by the previous owner to the Local Authority as part of the masterplan proposals for the development of the subject residential lands). There is potential for the future extension of the outer relief road to link with Lagore Road in the future, through a Part 8 application or third party delivery (however, the TTA demonstrates that this link is not required to serve the vehicular movements of the proposed development).

It is further proposed as part of the SHD development to provide for pedestrian / cycle accesses to the subject site linking with the existing residential development to the north, and providing for a link with Lagore Road further to the north. The development also integrates with the permitted / existing The Willows residential development to the south of the SHD site and includes a proposed connection to the employment lands to the west which have been identified by the Department of Education and Skills as the site for the future education campus for the town (heads of terms currently being agreed by the applicant and the DoES).

The Traffic and Transport Assessment prepared by ILTP Consulting which is submitted with this application addresses the impact of the proposed development on the surrounding road network.

Transport Infrastructure

The subject site is well served by transport infrastructure, including a range of public and private transportation modes.

The location of the site provides for ease of access to the R147 via private car. The site is located adjacent to existing and planned public and private bus facilities. The R147 also provides for strong pedestrian and cycle links with the adjacent town centre, employment and social infrastructure in the town.

A full Traffic and Transport Assessment has been prepared by ILTP Consulting Engineers and is submitted as a standalone document with this application. The impact that the proposed development would have on the transportation infrastructure in the vicinity of the proposed development site has been fully assessed in the TTA.

Foul and Surface Water

The proposed development will comprise of a new surface water drainage system to collect generated stormwater run-off and attenuate it before discharging to the existing drainage ditches, which is addressed in detail in the engineering reports and drawings accompanying the application.

The proposed development will have separate drainage systems for wastewater and surface water generated from within the development. Both the wastewater & surface water drainage networks have been designed by Joseph O'Reilly Consulting Engineers and are designed to accord with policies and guidelines outlined in 'BS EN 752:2008 Drain and Sewer Systems outside buildings' and Building Regulations 2010, TGD Part H and the Greater Dublin Strategic Drainage Study (GDSDS).

The surface water drainage network for the proposed development has been designed to control the rate of runoff water discharging to the receiving environment. Sustainable Urban Drainage System principles provided by CIRIA (UK) C753 Design Manual and the Institute of Hydrology (UK) - IH 124 method were used to predict the pre-development runoff rates in various rainfall events and have been calculated and used to select maximum allowable discharge rates to the receiving environment.

The wastewater generated from the development once complete will discharge to Irish Water's wastewater network at two locations. It is proposed to discharge the wastewater from the proposed development into the existing 225mm gravity sewer main which runs through the proposed site. The gravity sewer was installed a number of years ago and discharges from two waste water pumping stations, one located adjacent to the development site on the R147 and second located along Lagore Road, which is North of the proposed site. The proposed foul layout will tie into the existing 225m gravity sewers at several different locations. Due to the layout of the existing gravity sewer and the site, the proposed foul system is made up of 5 separate foul networks and 8 localised connections (collector systems) to the existing 225mm gravity sewer.

Water supply

As noted within the water infrastructure engineering report prepared by JOR Consulting Engineers, a 200mm diameter water main was installed during the Phase 1A & 1B construction stage which is connected to the existing 200mm public watermain in the R147 road. It is proposed to connect a 200mm watermain to feed the proposed development with 100mm branches servicing the various different areas within the site.

The 200mm water main will be installed to the northern boundary of the site where future connection can be made to link to the water main on the Lagore Road. Refer to the relevant engineering drawings for the proposed water main layout. The maximum daily water demand is 393,385 l/day.

Natural Gas Supply

Previous Phases of residential development to the south included the provision of a connection to the gas supply network. The application is accompanied by a utility report and drawings for the proposed development illustrating how the proposal will be supplied via an extension of this connection.

Electrical Supply

Previous Phases of residential development to the south included the provision of a connection to the ESB electricity supply network. The application is accompanied by a utility report and drawings for the proposed development illustrating how the proposal will be supplied to provide electricity supply throughout the development.

Information and Communications Technology (ICT)

The main access roads and internal corridors within the development shall contain ducting / cable ways and chambers as deemed necessary for the ICT utility providers in this area. Postal services to the area are provided by An Post.

Waste

A Construction and Operational Waste Management Plan has been prepared by Byrne Environmental Consulting Ltd (BECL) and is included as a standalone report with this planning application. This includes information on the predicted waste arising from the construction phase of the proposed development. During the operational stage the houses and apartments will be served by the waste collectors operating in this area.

11.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

As set out in greater detail within Chapter 2 of the EIAR, the proposal is for a Strategic Housing Development comprising of 913 no. residential units (comprising houses, apartments, and duplex units), along with neighbourhood centre facilities (including retail units, a café / restaurant unit, a primary healthcare / gym, a community facility and a childcare facility), all associated open space, a section of the Outer Relief Road, internal roads, cycle and pedestrian infrastructure, services and all other associated development.

11.5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

11.5.1 Introduction

This section provides a description of the specific direct, and indirect, impacts that the proposed development may have during both the construction and operational phases of the proposed project. This is provided with reference to both the Characteristics of the Receiving Baseline Environment and Characteristics of the Proposed Development sections while also referring to the (i) magnitude and intensity, (ii) integrity, (iii) duration and (iv) probability of impacts. The Impact Assessment addresses direct, indirect, secondary, cumulative, short, medium and long-term permanent, temporary, positive and negative effects as well as impact interactions.

11.5.2 Urban Settlements

Construction Phase

The construction phase of the proposed development is likely to have some temporary impacts on the existing urban settlement in the vicinity of the site. This would be due to disturbance during the construction phase and some additional minor and temporary additions to the local population which may arise out of the construction activity.

These localised impacts are addressed in the relevant Chapters of this EIAR document.

Operational Phase

The proposal will result in the provision of an additional 913 no. residential units and neighbourhood centre facilities (including retail uses, café / restaurant use, gym/ healthcare use, a community unit and a large childcare facility) along with open space and recreational areas.

11.5.3 Ownership & Access

Construction Phase

The subject lands are not developed at present. There will be some temporary disturbance during construction to the surrounding area, however, this will be minimised as best as possible through appropriate mitigation measures as set out in the construction management plan included as a standalone report with this planning application.

As set out in the land and soils section of this EIAR, it is intended that during the construction phase of the proposed development, a layer of topsoil (not likely to exceed 3 metres in depth as there are no underground car parks proposed) will be removed from the subject site or relocated within the subject site and used in gardens and landscape areas. This will result in increased construction traffic accessing and leaving the subject site in order to transport topsoil.

The details of the deliveries and access to the construction site will be decided on prior to construction commencing and will be subject to agreement with the Planning Authority as part of the Construction Management Plan, including traffic management. Any alterations to the local road network are likely to have a short-term negative impact on road users.

Operational Phase

The proposed SHD development will link directly with the Phase 1A , 1B, and 1C developments which form part of The Willows to the south of the SHD site. The traffic and transport impact of the development is assessed within the TTA prepared for the current application by ILTP.

The proposed development will also provide for a pedestrian and cycle access to the existing residential development to the north of the subject site and onwards to the Lagore Road. The main vehicular access to the development will be via the section of the outer relief road included in the application from Phase 1 to the south, which is to be delivered as part of the SHD development, linking with the R147 to the south via an existing junction (to be signalised as per the Phase 1C conditions) and which has been delivered as part of the previous phases of development to the south. Subject to future development to be undertaken by the Local Authority via a Part 8, the outer distributor road will, in the future, connect with the Lagore Road to the north, providing for a link between the Lagore Road and the R147, in addition to serving the SHD development, the playing pitches to be delivered by others to the east, and potential future employment development on the lands in the ownership of the applicant to the east of the SHD application site.

The signalisation of this junction has been required by the Planning Authority as a condition of the grant of planning permission for the Phase 1C element of The Willows, under Reg. Ref.: RA171416.

11.5.4 Transport Infrastructure

Construction Phase

The increased volume of construction vehicles has the potential to impact negatively on the integrity of the local road network and an increased risk of soil, dust and other construction materials being deposited thereon resulting in a potential traffic hazard in the absence of mitigation. The potential impact of the proposed development on transportation infrastructure is likely to be short-term and low. The Traffic and Transportation Assessment (TTA) includes a section which addresses likely construction phase traffic impacts.

Operational Phase

The operational phase of the proposed development will result in increased volumes of traffic using the local road network. The Traffic and Transportation Assessment assesses the anticipated levels of traffic generated by the proposed development and models the impacts of the proposed development on surrounding road infrastructure. It concludes that the SHD proposal will not result in any material deterioration of local road conditions.

It should be noted that the traffic impact of the proposed development was utilised to inform the Air Quality and Climate and Noise and Vibration sections of this EIAR.

11.5.5 Foul Water Disposal (also see Chapter 8)

Construction Phase

The proposal will involve providing new connections to the existing potable water supply network. There is potential for some short term impacts by way of disruption in water supply due to these works however it is likely that the potential impact from the construction phase of the proposed development on the local water network is likely to be neutral.

Operational Phase

The potential impact from the operational phase on the water infrastructure is likely to be long term and moderate. These issues are discussed in greater detail in the Water Services Design Report.

11.5.6 Potable Water Supply (also see Chapter 8)

Construction Phase

The proposal will involve providing new connections to the existing potable water supply network. There is potential for some short term impacts by way of disruption in water supply due to these works however it is likely that the potential impact from the construction phase of the proposed development on the local water network is likely to be neutral.

Operational Phase

The potential impact from the operational phase on the water infrastructure is likely to be long term and moderate. These issues are discussed in greater detail in the Water Services Design Report.

11.5.7 Surface Water Disposal (also see Chapter 8)

Construction Phase

The proposal will involve providing new connections to the existing surface water network. There is potential for some short term impacts due to these works, however, it is likely that the potential impact from the construction phase of the proposed development on the local surface water network will be neutral.

Operational Phase

The impact on the surface water drainage is addressed in detail in Chapter 8 of this EIAR and within the Water Services Design Report and suitable mitigation measures are recommended.

11.5.8 Natural Gas Supply

Construction Phase

The supply of natural gas from the network will not be active or operational during the construction phase of the development. The potential impact from the construction phase of the proposed development on the local gas supply network is therefore likely to be neutral.

Operational Phase

The impact of the operational phase of the proposed development on the gas supply network is likely to be to increase the demand on the existing supply. The potential impact from the operational phase on the gas supply network is likely to be long term and moderate

11.5.9 Electrical Supply

Construction Phase

Construction related activities will require temporary connection to the local electrical supply network. The potential impact from the construction phase of the proposed development on the local electrical supply network is likely to be short-term and low.

Operational Phase

The impact of the operational phase of the proposed development on the electricity supply network is likely to be to increase the demand on the existing supply. The potential impact from the operational phase on the electricity supply network is likely to be long term and moderate.

11.5.10 Telecoms / Broadban

Construction Phase

Fixed telecoms will not be operational during the construction phase. The construction phase is likely to give rise to the requirement to divert existing fixed telecom lines. If not undertaken in accordance with best practice procedure, this has the potential to impact on local telecoms connectivity. The potential impact from the construction phase of the proposed development on the local telecoms / broadband network is likely to be short-term and low.

Operational Phase

The impact of the operational phase of the proposed development on the telecoms network is likely to be a marginal increase in demand. The potential impact from the operational phase on the telecoms network is likely to be long term and negligible.

11.5.11 Municipal Waste

Construction Phase

The construction phase of the proposed development will give rise to the requirement to remove or to bring on to the site quantities of material. Construction related waste will also be created on the proposed development site. This has the potential to impact on the local municipal waste disposal network. The potential impact from the construction phase on municipal waste disposal is likely to be short-term and moderate. Please refer to the BECL Construction and Demolition Waste Management Plan for further details.

Operational Phase

The impact of the operational phase of the proposed development on municipal waste disposal will result in an increase in demand. The potential impact from the operational phase on municipal waste disposal is likely to be long term and moderate.

11.6 POTENTIAL CUMULATIVE IMPACTS

The cumulative effects of development on material assets have been assessed taking other planned, existing and permitted developments in the surrounding area into account. Much of the area surrounding the proposed development site accommodates existing residential and commercial development, in particular the lands to the west, south, and north.

Residential development is permitted and under construction to the south of the SHD development site, as part of The Willows residential area, this adjacent development is not considered to contribute significantly to any impact on material assets when considered cumulatively. The lands to the north are occupied by an existing residential development, while Dunshaughlin Business Park is located to the west / northwest of the subject site. A future education campus is planned for the lands to the west which will be a positive addition to this area of the town and reduce the travel demands from the development.

Cumulatively with other surrounding, permitted, planned and existing development, it is predicted that the proposed development will contribute to the improvement of the overall urban structure, and will have positive cumulative effects on urban settlements, access and transport infrastructure by improving permeability and allowing movement through a previously impermeable area.

The cumulative effects of development on foul and surface water disposal, potable water supply, natural gas supply, electrical supply, telecoms and municipal waste are anticipated to be negligible.

11.7 DO NOTHING IMPACT

In order to provide a qualitative and equitable assessment of the proposed development, this section considers the proposed development in the context of the likely impacts upon the receiving environment should the proposed development not take place.

If the proposed development does not proceed there would be no additional demand or loading on material assets of natural or human origin.

11.8 AVOIDANCE, REMEDIAL AND MITIGATION MEASURES

Remedial, mitigation and avoidance measures describe any corrective or mitigative measures that are either practicable or reasonable, having regard to the potential impacts. This includes avoidance, reduction and remedy measures as set out in Section 4.7 of the Development Management Guidelines 2007 to reduce or eliminate any significant adverse impacts identified. It should be noted that a number of mitigation measures proposed in the other EIAR Chapters are also of relevance to material assets but will not be repeated here.

Construction Phase

The following mitigation measures are proposed for the construction phase of the proposed development with reference to Material Assets:

MA CONST 1: The proposed development should comply with the provisions of the Construction and Operational Waste Management Plan with respect to construction waste.

MA CONST 2: A construction and environmental management plan, including traffic management, should be implemented by the contractor for the construction stage to protect local amenities and the integrity and operation of the local road network during the construction phase.

MA CONST 3: Provision of utilities should be carried out in accordance with the recommendations of the relevant statutory bodies (ESB, Gas Networks Ireland, Irish Water, EIR / Virgin, MCC etc.)

MA CONST 4: Water Metering should be included in each unit to record consumption.

Operational Phase

No mitigation measures are considered necessary during the operational phase.

11.9 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

This section allows for a qualitative description of the resultant specific direct, indirect, secondary, cumulative, short, medium and long-term permanent, temporary, positive and negative effects as well as impact interactions which the proposed development may have, assuming all mitigation measures are fully and successfully applied. It should be noted that in addition to remedial and mitigation measures, impact avoidance measures have also been built in to the EIAR and project design processes through the assessment of alternatives described in Chapter 2 of this EIAR document.

Construction Phase

If unregulated, predicted impacts associated with the construction phase of the proposed development would be expected to include potential disruption to local natural and human material assets resulting in both short-term and long-term impacts. The implementation of the mitigation measures set out in this Chapter and other Chapters of the EIAR document would ensure that there is unlikely to be any significant residual impact during the construction phase. Therefore, overall impacts are likely to be temporary and neutral.

Operation Phase

The proposed development will have a positive impact on the existing urban environment by creating high quality residential units and neighbourhood centre facilities to cater for the needs of a growing population and responding to a significant housing need and demand in the locality and the region. Traffic movements associated with the proposed development are likely to have a long-term and neutral impact on the operation of the local road network subject to the recommendations of the ILTP Traffic and Transport Assessment being implemented.

The predicted waste water generation of the proposed development will be adequately accommodated in the local foul sewer network. Residual predicted impacts on this infrastructure are likely to be long-term and neutral.

The proposed development is designed to comply with the provision of SUDS and is therefore unlikely to have any residual impacts in terms of the impact on surface water drainage.

The proposed development is unlikely to have any significant impact on the local water, electricity or gas supply networks and the overall impact with respect to these utilities can be described as long-term and neutral.

'Worst Case' Impacts

The EPA Guidelines (2002) provide that the "Worst Case" impacts should be described only where the failure of the project, or its mitigation measures, could lead directly to profound, irreversible or life-threatening

consequences. Systematic risk assessments are only employed only where the "worst case" impacts pose significant threats to the environment and/or human health. It is important to note that this is not applicable in the case of the proposed development and the likelihood of such a scenario occurring in respect of the proposed development is negligible.

11.10 MONITORING

Monitoring measures will be in accordance with provisions outlined elsewhere in this EIAR document.

11.11 REINSTATEMENT

N/A

11.12 INTERACTIONS

Interactions between Material Assets and other environmental topics are outlined throughout this EIAR document.

11.13 DIFFICULTIES ENCOUNTERED IN COMPILING

No significant difficulties were encountered in completing this section.

11.14 REFERENCES

N/A