

**Addendum to the Planning Environmental
Considerations Report (PECR) for the Proposed
Ballinrea 110 kV Substation and Grid Connection,
County Cork**

Project Code: RH0889

Client: Ballinrea Solar Farm Ltd

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Version	Date	Description	By	Approved By
1.0	28/01/2026	Draft for issue	RK	RMJ
2.0	10/02/2026	Client comments	RK	RMJ
3.0	11/02/2025	Edited introduction	RK	RMJ
4.0	26/02/2026	Edited figures	RK	RMJ
5.0	02/03/2026	Edited figures and mitigations	RMJ	RMJ

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1 INTRODUCTION

This document serves as an addendum to the previous Planning Environmental Considerations Report (PECR) for the permitted Ballinrea 110 kV substation and grid connection, County Cork. This study was undertaken by Rubicon Archaeology Limited for Ballinrea Solar Farm Ltd.

The development of a 110 kV substation, grid connection and associated infrastructure at Ballinrea, Co. Cork has previously been granted permission by An Bord Pleanála as ‘Strategic Infrastructure Development’ (SID) under the provisions of Section 182A of the Planning and Development Act 2000 as amended (Case Number ABP-317706-23).

The permitted development comprises the following;

- The construction of a permanent 110 kV electrical substation in the townland of Ballinrea at the site of the permitted Ballinrea Solar Farm (PI Ref. 17/6784, ABP Ref. PL04.303013). The proposed 110kV electrical substation includes 2 no. single storey control buildings with welfare facilities, associated electrical plant and apparatus, security fencing, entrance gate, fire wall, 4 no. lighting columns, 1 no. telecoms pole (c. 20.7m above ground), 7 no. lightning masts (c. 18m above ground), underground cabling, wastewater holding tank, watermains connection, site drainage; and all ancillary works;
- 1 no temporary construction compound with temporary site offices and staff facilities, in the townland of Ballinrea;
- Realignment of the permitted internal access track permitted under PI Ref. 17/6784, ABP Ref. PL04.303013 and the provision of a new internal cable maintenance track;
- Temporary alterations to the site entrance for construction phase and reinstatement of same post-construction;
- 110kV tail fed underground electricity interconnection cables c. 6.25km in length and associated fibre cable connecting the proposed 110kV Substation at Ballinrea to the existing 220kV Raffeen Substation with underground ducting, 9 no. joint bays, communication chambers and associated site development and reinstatement works;
- A new 110kV cable bay, electrical equipment, the provision of a new cable maintenance track and ancillary works at the existing 220kV Raffeen Substation compound;
- All associated site development works, landscaping and apparatus.

The 110kV substation and grid connection to Raffeen 220kV substation facilitate the connection of two permitted solar farms in the local area to the national grid;

- Ballinrea Solar Farm – Planning Ref. No. 17/6784 & ABP-303013-18, as subsequently modified by Planning Ref. No. 23/4563 & ABP-318915-24;
- Ballinvuskig Solar Farm – Planning Ref. No. 19/5371 & ABP-305186-19, as modified by Planning Ref. No. 23/41837 & ABP-318925-24.
-

Ballinrea Solar Farm is over midway through construction while civil works are ongoing on Ballinvuskig Solar Farm, with completion forecast for early April 2026. All major solar farm deliveries including, PV modules, support structures, inverters and transformer centres were complete as of early January 2026.

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Regarding the Grid and the civil installation for the 33kV cable connection between the Ballinrea and Ballinvuskig sites is complete and the IPP substation and 110kV substation works are significantly advanced with buildings substantially complete from a civils perspective and electrical fit-out ongoing. The grid transformer was delivered to site in late January.

This Addendum report is prepared in support of a request to An Comisiún Pleanála to alter the permitted SID scheme in accordance with Section 146B of the Planning and Development Act 2000, as amended. In summary the proposed amendment comprises the relocation of c. 370m of the permitted 110kV grid connection from the public road (L2473 Shannonpark Road) to adjacent third party lands.

The alteration to the scheme is being requested to avoid interacting with Uisce Éireann (UÉ) infrastructure, namely 2 no. existing high-pressure asbestos services which are located within the Shannonpark Road (the public road L2473) section of the grid route. Following engagement between Ballinrea Solar Farm Ltd and UÉ throughout 2025, it has become apparent that installation of the proposed 110kV cable along the corridor consented under planning permission ABP-317706-23 would require the complete replacement of the aforementioned services which run parallel to the consented route for approximately 870m.

The pipes would need to be replaced with ductile iron or HDPE materials to allow safe installation of the cable in closer proximity to the existing services. The replacement is necessary due to the risk of rupture of the existing UÉ services within the roadway which are asbestos material which suffer from embrittlement with age.

The proposed amendment would remove approximately 370m of the 110kV cable route from the roadway where UÉ services are currently located removing the need for pipe replacement works in this area. The underground cable will leave the Shannonpark road, passing through consented third-party lands (Folio no. CK77185F) for approximately 370m before joining existing ducting at the M38 crossing in the east (as per the permitted SID route). The proposed works include the relocation of one joint bay (Joint Bay 06) to the third-party lands (refer to Drawing no. 300101179-DR-802 and 300101179-DR-803). Avoiding these replacement works which would otherwise be required for the installation of the 110kV grid infrastructure significantly reduces the potential for UÉ service disruptions locally. It should be noted that the UÉ services referenced supply potable water for the greater Carrigaline area and any interruptions to this supply have the potential to affect in excess of 15,000 residential users.

Avoiding this portion of the replacement works is also in line with HSA guidance for works associated with Asbestos Containing Materials (ACMs), which recommends that works should be planned to firstly avoid disturbing identified ACMs and such works should only be carried out if absolutely necessary and when the necessary controls are in place.

When required as per the planning conditions attached to the grant of permission, construction phase monitoring has taken place under licence on the site of and the permitted Ballinrea Solar Farm and 110 kV substation and grid connection (ABP-303013-18) and associated substations from May 2025 to January 2026 and is ongoing. To date, nothing of archaeological significance has been uncovered during monitoring in the Townlands of Ballinrea, Ballinvuskig and Ballinreeshig in relation to the construction of the solar farm and associated infrastructure.

This addendum report discusses and assesses an updated impact assessment on the archaeological and cultural heritage of the area, based on the updated cable route. The 100 kV substation has already been

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constructed, and as such this addendum focuses only on those receptors which may be impacted by the relocation of the cable route. The results are presented in Table 2 and Table 3 below.

2 ADDITIONAL CULTURAL HERITAGE RECEPTORS

Two additional cultural heritage receptors have been identified and included in the cultural heritage database for the Proposed Development (Figure 1). These are two Townland Boundaries, CH104 and CH105, outlined in Table 1 below. Both of these boundaries have been considered in the updated impact assessment.

CH ID	ID No.	Short Description	Townland/s
CH104	TB08	Townland Boundary	Ballinrea/Ballinrea South/Ardnacloghy
CH105	TB09	Townland Boundary	Ballinrea/Shannonpark/Ardnacloghy

Table 1 — Additional cultural heritage receptors considered in the updated impact assessment.

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3 IMPACT ASSESSMENT

3.1 Direct Effects

Most impacts during construction are direct impacts as a result of sub-surface disturbance or construction works.

As a result of the proposed amendment, the route will have a direct effect on two townland boundaries (CH104, CH105). The townland boundaries have already been partially broken by the modern road network, and the proposed cable route will be laid both within the surface of the existing modern roadway, and associated verge, across the M28 (currently under construction) and greenfield. Part of the cable route passes through an existing entrance between hedgerows which form the upstanding remains of the townland boundaries, and as such will have a direct effect on the boundaries. Given that the townland boundaries have been previously disturbed by the road construction, and the use of the existing entrance will reduce the disturbance of the hedgerow, the effect of the cable route is judged to be slight.

3.2 Indirect Effects

Although the proposed cable route crosses the Zone of Notification associated with CH019, this monument has been excavated as part of the M28 motorway development. Therefore, the entire Zone of Notification for CH019 has been archaeologically monitored previously as part of the same development.

In addition to CH019, the amended cable route passes through the Zone of Notification associated with one other RMP receptor (CH014). The proposed amendment to the cable route will have an indirect effect on the monument by having an impact on any associated unknown subsurface archaeological deposits within this Zones of Notification.

Given the underground nature of the proposed development, no effect on the setting of any identified CH sites is predicted.



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CH No.	Category	Summary	Baseline Value	Effect Type	Description of Impact	Impact Magnitude	Significance of Impact
CH014	RMP	Monument where the Proposed Development crosses the ZoN	Very High	Indirect effect	Potential permanent direct impact to any structural elements associated with the gates, railings or walls.	Moderate	Moderate
CH019	RMP	Previously excavated monument where the Proposed Development crosses the Zone of Notification	Very High	No effect	No effect anticipated.	Imperceptible	Imperceptible
CH104, CH105	Townland Boundaries	Townland Boundaries	Medium/ Low	Direct effect	Potential permanent effect on any extant remains associated with the townland boundaries;	Slight	Negligible

Table 2 — Summary impacts following design changes.

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4 MITIGATIONS

In light of both the design changes and the archaeological investigations already carried out along the cable route, the following revised mitigations are recommended:

1. The proposed cable route cross the Zones of Notification for two RMP receptors (CH014, CH019). All groundworks undertaken within the Zone of Notification associated with CH014 (along the roadway and off-road) should also be subject to archaeological test trenching and monitoring by a suitably qualified archaeologist under licence. Consequently, two months' prior notice in writing should be given to the Minister for Housing, Local Government and Heritage, prior to the commencement of works in these areas. No additional monitoring is recommended within the Zone of Notification associated with CH019, given previous archaeological excavation of the monument.
2. Areas of proposed ground disturbance within greenfield portions of the scheme should be subject to pre-development archaeological test trenching by a suitably qualified archaeologist under licence, in accordance with the planning conditions attached to the grant of permission for the Ballinrea 110kv Substation and Grid Connection.
3. Should archaeological features or deposits be discovered during the course of the test trenching and monitoring, the extent of such features/deposits will be determined, a GPS location of the site will be established and works at this location will cease. A strategy will be proposed to the County Archaeologist and National Monuments Service to preserve the site *in situ*, where possible. Where preservation *in situ* cannot be achieved, either in whole or in part, then a programme of full archaeological excavation will be proposed, to ensure the preservation by record of the portion of the site that will be directly impacted upon. This work should be carried out by a suitably qualified archaeologist under licence and in accordance with the provisions of the *National Monuments Acts 1930–2014*.
4. Where a section of an upstanding townland boundary must be removed a representative cross-section of the feature will be investigated and recorded by a suitably qualified archaeologist prior to removal.
5. The results of any archaeological test trenching, monitoring, surveys and/or excavation will be submitted in a report to the Local Authority, the Heritage and Planning Division, Department of Housing, Local Government and Heritage and the National Museum of Ireland.

Please note all recommendations are subject to the approval of the National Monuments Service and the local planning authority.

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Ch. No	Phase	Baseline Value	Effect Type	Mitigation Measures	Magnitude of Effect after Implementation of Mitigation Measures	Significance of Effect after Implementation of Mitigation Measures
CH014	Construction	Very High	Indirect effect	Mitigation Nos. 1–2, 4	Slight	Moderate
CH019	Construction	Very High	No effect	No further mitigations recommended.	Imperceptible	Imperceptible
CH104, CH105	Construction	Medium/Low	Direct effect	Mitigation Nos. 3, 4	Not Significant	Imperceptible

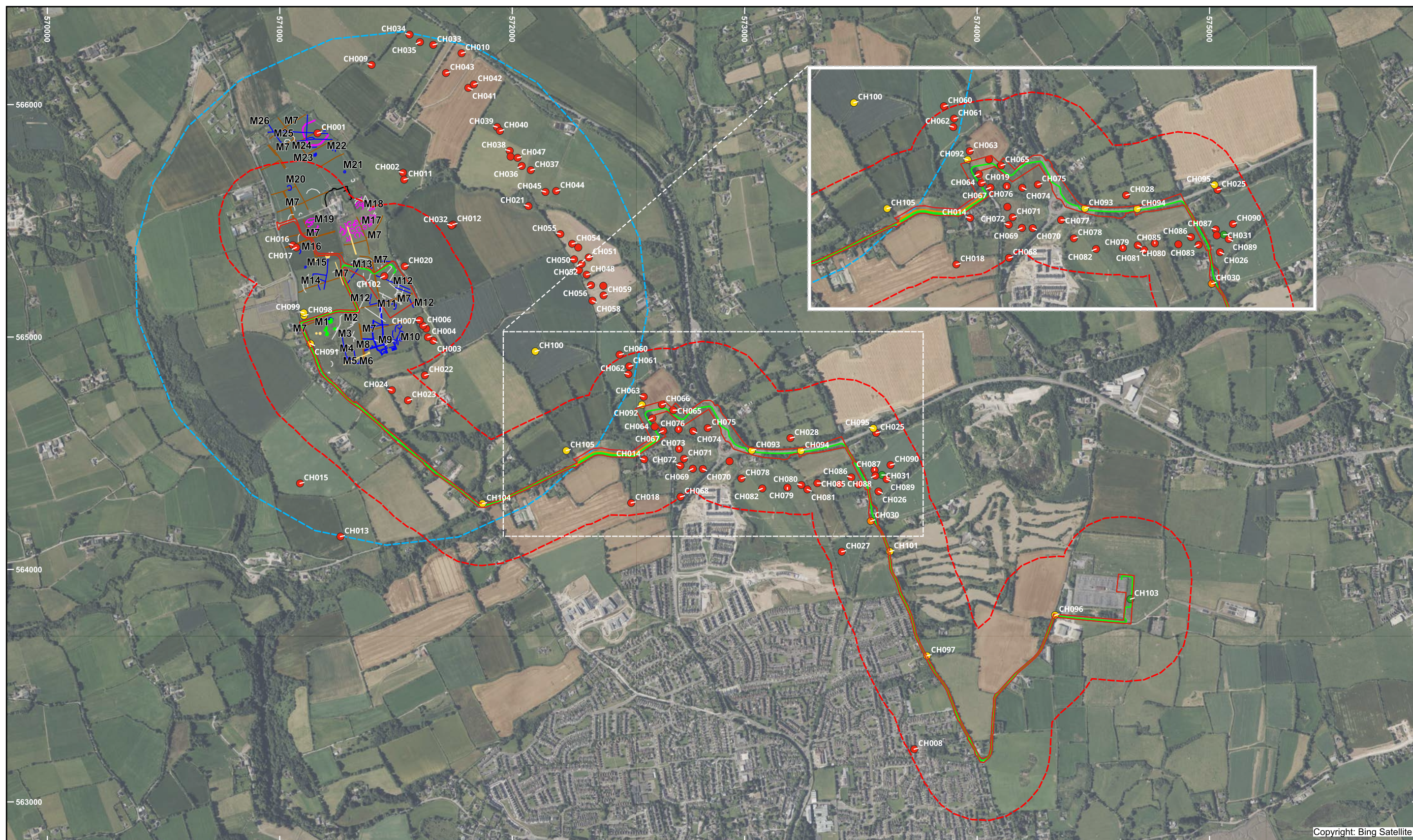
Table 3 — Effects following implementation of mitigation measures.

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5 CONCLUSIONS

This addendum report has determined that, as currently laid out, the 110 kV grid connection will have an indirect impact on three cultural heritage sites. It is accepted that CH019 has been previously fully excavated in advance of the construction of the M28 and will not be further impacted on by the Proposed Development. The sites impacted on by the 110 kV substation have been excluded from this report as they are covered by the previous PECR, as the substation had been constructed at the time of writing.

It is recommended that the mitigation measures detailed in Section 3 above be carried out. Please note all recommendations are subject to the approval of the National Monuments Service and the local planning authority.



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Key:

CH Sites Baseline Value

- Very High
- High
- Medium/Low
- Low

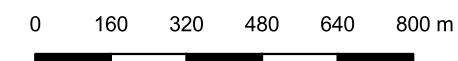
RMP Zones

Permitted Boundary

- Underground Grid Connection
- Grid Connection Cable Study Area
- Amended Boundary

Proposed Substation

- SMR Zones
- Proposed Substation Study Area
- Proposed 110 kV Underground Cable Grid Route Amendment



Project: Ballinrea-Rafeen Connection Route

Date: 26/01/2026

Prepared by: J.Flynn

Scale: 1:16,000 @ A3

Approved by:
R.Morgan-James

Status: Final

Revision Number: 1.0

Figure 1 - Cultural Heritage sites within the proposed development study area.

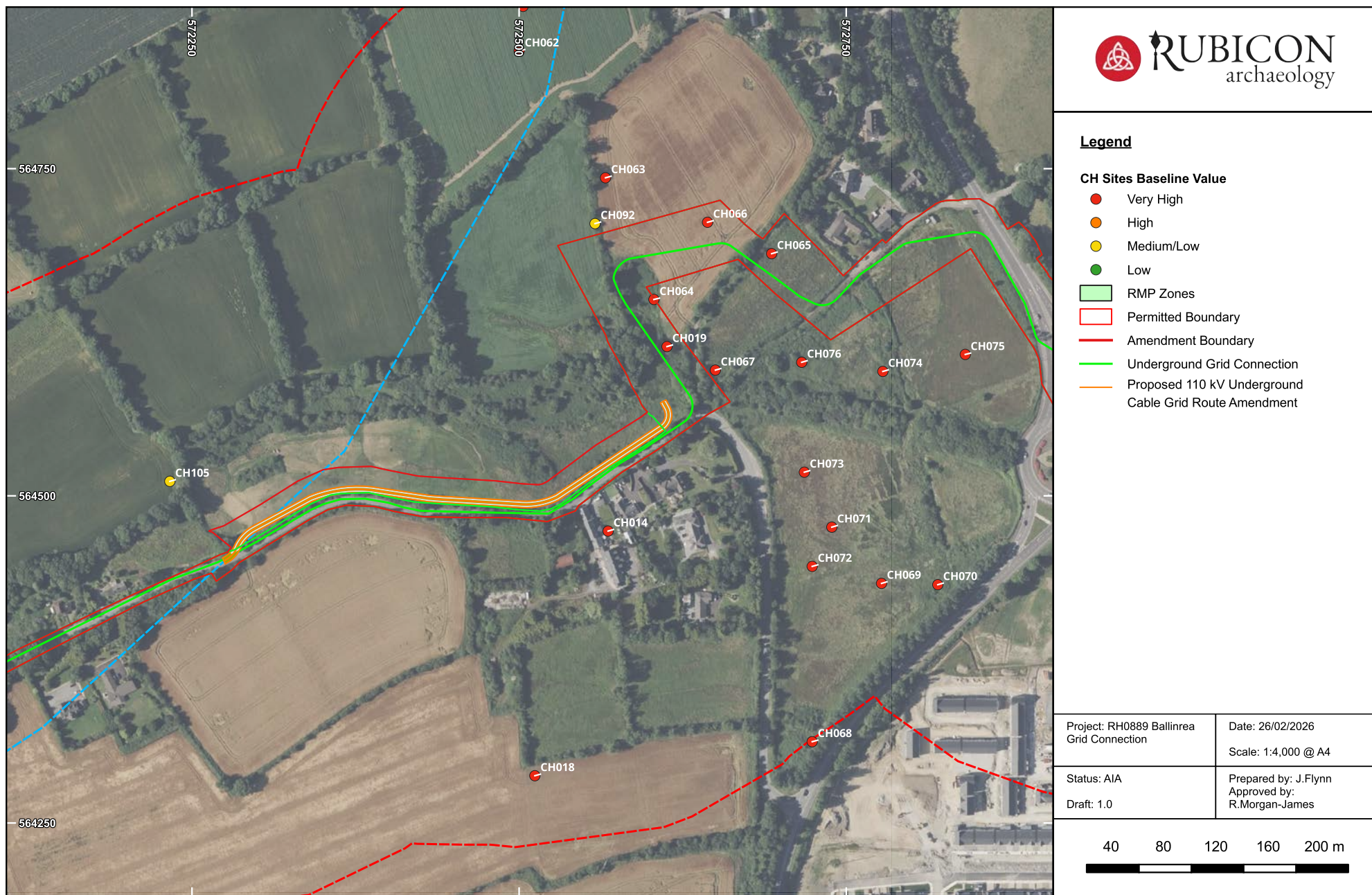


Figure 2 - Detailed view of amended grid route with CH sites.