Comhairle Contae Átha Cliath Theas
South Dublin County Council

Installation of a heat pump system Rua Red, Tallaght, Dublin, D24 KV8N

Part 8 Planning report

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1. Project Overview

South Dublin County Council (SDCC) propose to undertake works aimed at decarbonising and improving the energy efficiency of the existing electrical and heating system at **Rua Red, Tallaght, Dublin, D24 KV8N**.

The works to achieve decarbonisation and energy efficiency improvements across the building will include:

- The installation of a heat pump system comprising of 2 No 27kW Air Source Heat Pumps, to be located on the roof of the building, with associated site works.

These works will be supported by internal building modifications, the majority of which are concentrated in existing mechanical plantrooms, and as such are exempted development.

The proposed project is part of a wider proposal to decarbonise SDCC's buildings with the largest energy consumption and greenhouse emissions. Decarbonising involves the reduction or elimination of carbon emissions from how the building is heated/powered/used. The Baseline Emissions profile published in the SDCC's Climate Action Plan 2024-2029 identified 6 buildings owned by SDCC that are considered significant energy users and have the highest emissions reduction potential. The Rua Red building is one of the 6 critical buildings identified.

To deliver the decarbonisation and energy efficiency of the building, an Energy Performance Contract (EPC) has been procured by SDCC. This contract structure includes the delivery of capital works projects, including the project set out in this proposal, followed by a services phase during which the Energy Services Company that has installed the measures will be responsible for the efficient operation of the equipment. The structure of the EPC requires that this Energy Services Company guarantees energy savings associated with the energy and carbon saving measures being implemented, and they are incentivised to ensure that these are operated in the most efficient manner possible for the duration of the contract. For the Rua Red Building, the overall capital works projects are estimated to reduce energy consumption in the region of 61% and carbon emissions by 57%.

South Dublin County Council have worked closely with SEAI (Sustainable Energy Agency Ireland) to ensure that the project is aligned with overarching national policy and appropriate funding streams, and the project has received support from the SEAI Pathfinder programme. The Pathfinder programme offers support to public sector bodies that are implementing building retrofit and heat decarbonisation projects. The project has been prepared in line with the requirements of the Infrastructure Guidelines and has undergone detailed appraisal of the alignment of

the project with the principles of the Infrastructure Guidelines and overarching national policy.

The proposal has undergone Screening for Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive (92/43/EEC) and Screening for Environmental Impact Assessment under the EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU.

In accordance with Article 81 of the Planning & Development Regulations 2001, as amended, the Planning Authority has made a determination and concluded that:

(a) The proposed development, either individually or in combination with other plans and projects, will not result in likely significant effects on the qualifying interests, special conservations or the conservation objectives of any designated European Site. A Stage 2 Appropriate Assessment is therefore not required.

(b) The proposed development would not be likely to have significant effects on the environment and that the proposed development is not of a class set out under Schedule 5 of the Planning and Development Regulations 2001, as amended, and therefore the completion of an EIAR is not required.

The authority has also made a determination under Article 6(3) of the Habitats Directive (92/43/EEC) that the proposed development, either individually or in combination with other plans and projects, will not result in likely significant effects on the qualifying interests, special conservations or the conservation objectives of any designated European Site.

Subject to planning approval, it is anticipated that the majority of works installation would occur between September and December of 2026, with some minor works potentially continuing into 2027. Careful planning and consideration have been taken to ensure that disruption to building users is minimised during the installation of these works.

2. Site Description and proposed works

Rua Red Arts Centre is located on Old Blessington Road, Tallaght. The building is an arts and cultural facility, housing a wide range of creative spaces and facilities under one roof. The building was constructed in 2009 and has a useful floor area of approximately 2900 msq.

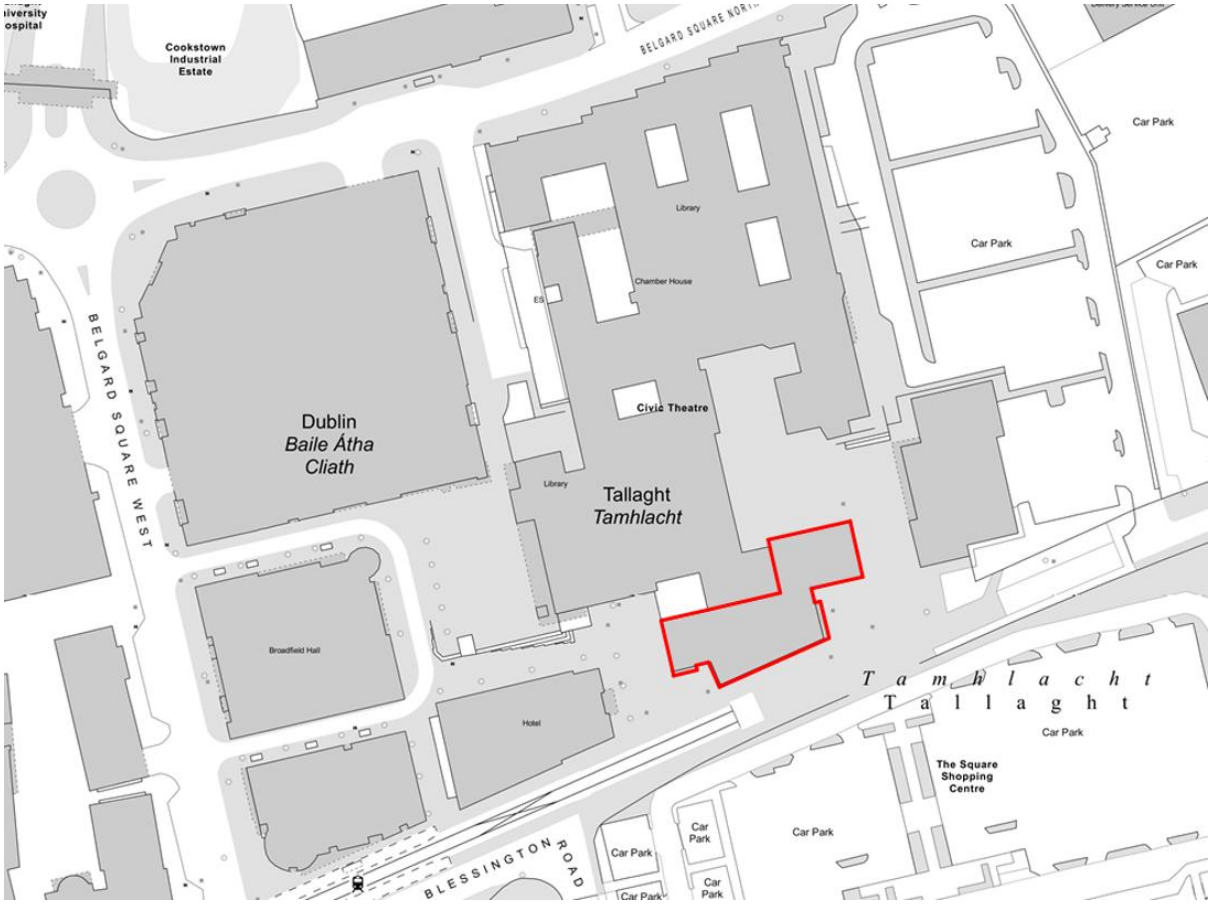

Figure 1: Red line boundary of the site

The building houses exhibition galleries, a performance space (with approximately 70 seats), artist studios, music facilities, dance studio, workshops/education rooms, administrative offices, meeting rooms, and a café.

The proposed works comprise:

- The installation of a heat pump system comprising of 2 No 27kW Air Source Heat Pumps, to be located on the roof of the building, as shown below, with associated site works.

The installation of a heat pump system

The building is currently heated by gas boilers, and a major component of the proposed works would be related to upgrading this heating system to incorporate low-carbon heat pump systems.

The upgrade works comprise of 2 No. External heat pump units, with the following specification.

Reference	Manufacturer	Model	Dimensions
ASHP 01	Rhoss	POKER-P	L: 1224mm H: 2335mm D: 1320mm
ASHP 02	Rhoss	POKER-P	L: 1224mm H: 2335mm D: 1320mm

ITEM	DESCRIPTION	IMAGE
POKER UNITS	**Manufacturer:** Rhoss **Family:** POKER-P **Model:** THAETP 250 P1 1mod **Webcode:** PK017 **Heating Capacity:** 37.3kW **SCoP @ 55°C:** 3.83 **Starting Current:** 119.7A **Nominal Current:** 30.4A **Electrical Supply:** 400-3-50 **Dimensions(mm):** L: 1224 H: 2335 D: 1320 **Empty Weight:** 685kg **Quantities:** - Rua Red – 2no.	

The heat pumps are to be installed on the roof of the building.

Details of the Noise Impact Assessment undertaken are included in Section 5 below.

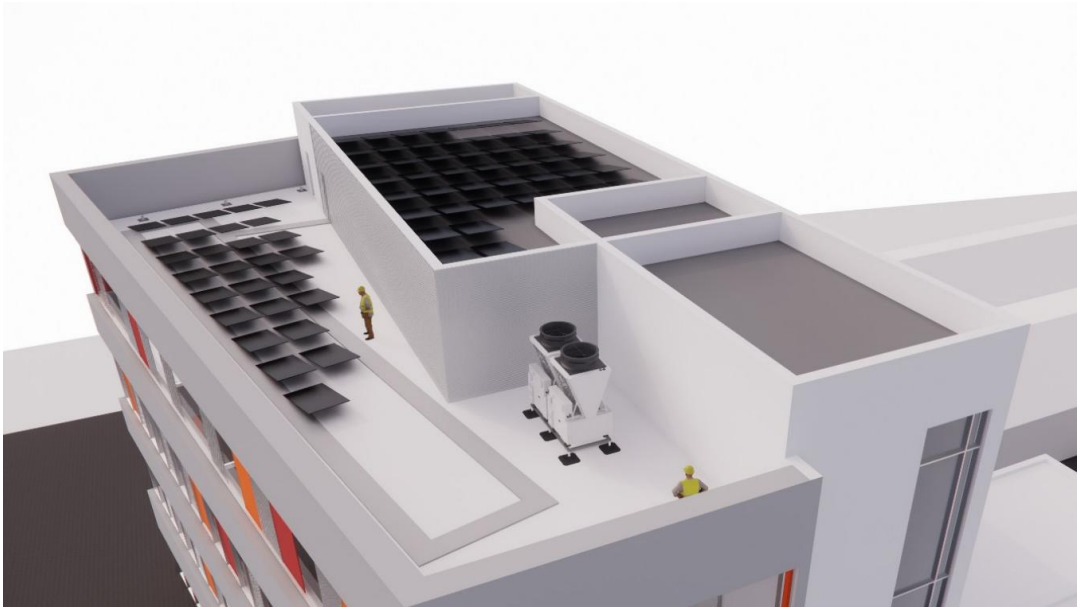

Figure 2: Render of the proposed heat pump location

Energy and Carbon Savings

The works under the Energy Performance Contract are estimated to reduce energy consumption by 61% and carbon emissions by 57%.

This comprises the following estimates:

- Energy Saving of approximately 177,000 kWh/year, with an associated financial benefit.
- Carbon Emissions Saving of approximately 36,000 kg CO2 / year.

This installation of a heat pump system, as outlined above, is necessary to achieve these potential targets.

3. Adjacent Projects

A further project to be delivered to support the decarbonisation and energy efficiency of the Rua Red building is the installation of rooftop solar PV. The array to be installed is less than 300msq and is considered exempted development in line with *(Planning and Development Act 2000 (Exempted Development) (No. 3) Regulations 2022)* and the the Solar Safeguarding Zone Regulations 2022 (S.I. No. 492/2022 - Planning And Development (Solar Safeguarding Zone) Regulations 2022)

However, as the building is in a Solar Safeguarding Zone (located approximately 300m from Tallaght Hospital Helipad), a Glint and Glare Assessment was undertaken, to ensure that there are no associated risks. The Assessment determined that the proposed arrays at the Rua Red building results in a 'Pass' at the Helipad receptors.

The solar PV project is not anticipated to have any impact on the proposed installation of heat pumps. The proposed location of the solar PV array is shown on the drawings for information purposes only and is not part of this application.

4. Project objectives and policy alignment

The Climate Action and Low Carbon Development (Amendment) Act 2021 is driving the requirement for Ireland to achieve a 51% reduction in greenhouse gas emissions by the end of 2030. With the introduction of carbon budgets and sectoral ceilings, as a Local Authority, South Dublin County Council is required to reduce our direct carbon emissions by 51%. SDCC owned buildings account for 45% of the Council's total energy demand and 40% of Council's total emissions.

This project aims to decarbonise and improve the energy efficiency of the Rua Red building and will significantly contribute towards meeting the targets. The structure of this project is centered around a performance guarantee, which ensures that ongoing operational performance delivers efficiency, as well as ensuring a high-quality service is provided to building users.

This project demonstrates SDCCs commitment to decarbonisation, climate action, and making progress towards achieving the Public Sector Climate Action Mandate. This Public Sector Climate Action Mandate also requires that public bodies, including Local Authorities, take actions to "lead by example" to demonstrate that decarbonisation and energy efficiency are achievable, and worthwhile goals for organisations to pursue.

SDCC have progressed this project in alignment with various relevant Council plans and policies, including;

- South Dublin County Council Corporate Plan 2025-2029
- South Dublin County Council Climate Action Plan 2024 - 2029,
- South Dublin County Council County Development Plan 2022 – 2028.

4.1 South Dublin County Council Corporate Plan 2025-2029

The SDCC Corporate Plan identifies "Climate Leadership" as one of the seven Goals of the plan and identifies an objective to *"make South Dublin a low carbon and climate resilient county".* Each of the seven Goals includes targets and indicators, and these indicators under the "Climate Leadership" Goal include "*Number of retrofit works to improve the energy efficiency of council-owned buildings*", and the *"% Local authority energy savings"*.

The proposed project directly promotes this Goal by demonstrating the Councils commitment to meaningful climate action by decarbonising significant energy and emission producing buildings. The structure of this project ensures progress will

be seen on these indicators as the project includes an energy performance guarantee that ensures ongoing maintenance and performance are a central aspect of the project. This will ensure that the anticipated reductions in operational energy costs continues for the life of the project and protects against the "rebound effect" that is often seen in energy retrofit projects. This rebound effect occurs when energy savings from efficiency measures are negated over time as occupants use more energy than required to maintain a comfortable environment, and this negatively impacts energy and financial savings.

Figure 4: The Seven Goals of the SDCC Corporate Plan 2025-2029

The SDCC Corporate Plan also identifies creating "*A Better Place*" that will "*Deliver the infrastructure and facilities required to serve our growing population*" as a key Goal of the plan. The proposed project delivers on this goal by contributing to the modernisation and upgrading of existing buildings to contribute to the ongoing to ensure continued delivery of high-quality public and community facilities.

4.2 South Dublin County Council Climate Action Plan 2024 – 2029

The SDCC Climate Action Plan sets out a range of actions across the six theme areas of Energy & Buildings, Transport, Flood Resilience, Nature Based Solutions, Circular Economy & Resource Management and Citizen Engagement, and these areas are aligned to national climate policy to deliver the transition to a climate resilient and sustainable economy.

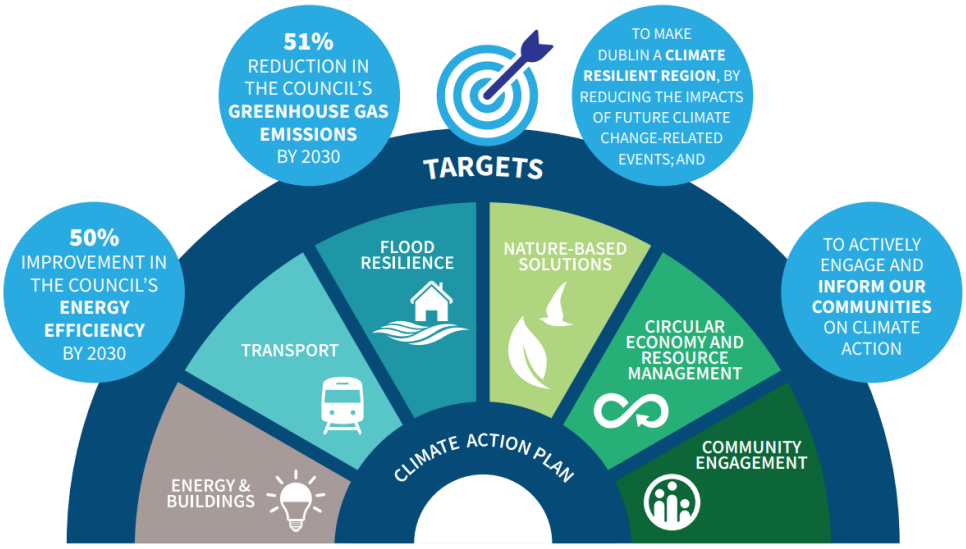

Figure 5: The six action areas of the SDCC Climate Action Plan 2024-2029

Action E8 of the CAP specifically identifies the progression of this project as part of a wider Energy Performance Contract as an action required in order to improve energy efficiency and reduce carbon emissions in SDCC buildings as outlined below.

Improve Energy Efficiency and reduce Carbon Emissions in SDCC Buildings							
E8	Progress Energy Performance Contracts (EPC) to deliver energy efficiency targets for SDCC owned buildings with significant energy usage, including the Leisure Centres, County Hall and Library, and Clondalkin Civic Offices.	EPC awarded; Measurement and verification of savings	Planned Commencement: Ongoing. Duration: until 2029.	Mitigation	Full Accountability	EWCC - Climate Action, Energy	CODEMA, Housing, Social and Community Development (HSCD); Corporate Performance and Change Management (CPCM); Leisure Centre Management

Figure 6: Extract of action E8 of the SDCC Climate Action Plan regarding the delivery of an Energy Performance contract

Action E15 of the CAP outlines the intention to install solar PV arrays on council-owned buildings, and this project will deliver on this action as solar PV is included in this proposal. The installation of this solar PV, along with efficiency gain across the building, will result in significant carbon, as well as annual bill savings due to reduced electricity imports at the building.

4.3 SDCC County Development Plan 2022 – 2028

Chapter 10 of the SDCC County Development Plan on Energy outlines a vision to "*Deliver a green society and circular economy adaptable to new technologies, a home and place of employment for people and industries striving towards reducing their carbon footprint*". The plan outlines various policies and objectives to support the decarbonisation and optimisation of energy performance in both new and existing buildings across the County.

Objective 3 of Policy E7 specifically outlines support for the installation of solar PV on council-owned buildings, as will be delivered in this project.

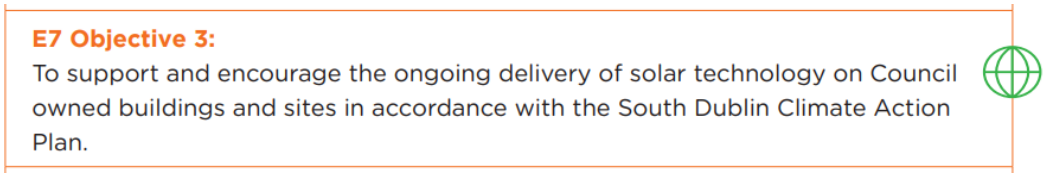

Figure 7: Extract of Policy E7, Objective 3 of the SDCC County Development Plan supporting the installation of solar PV on council buildings

5. Environmental Impact Assessment and Appropriate Assessment

Summary of findings

The proposal has undergone Screening for Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive (92/43/EEC) and Screening for Environmental Impact Assessment under the EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU.

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The authority has also made a determination under Article 6(3) of the Habitats Directive (92/43/EEC) that the proposed development, either individually or in

combination with other plans and projects, will not result in likely significant effects on the qualifying interests, special conservations or the conservation objectives of any designated European Site.

Full details can be found in the reports:

- 'Report to Inform EIA Screening for Proposed Energy Works at the Rua Red, Tallaght, Dublin 24' (P26147-FT-ENG-XX-RP-EN-006)
- 'Report to Inform Appropriate Assessment Screening for Proposed Energy Works at the Rua Red, Tallaght, Dublin 24' (P26147-FT-ENG-XX-RP-EN-0012).

6. Noise Impact Assessment

A Noise Impact Assessment (SDC2401-ALT-CCO-XX-RP-Z-80011 Noise Impact Assessment Report is included with the Part 8 application) has been prepared to examine any potential impact of operational noise from proposed heat pumps on the surrounding buildings, residential units, or users of the building, for both daytime and night time operational noise levels.

A baseline noise survey was undertaken to measure the existing noise levels in the area. A noise model of the proposed site was developed to predict the noise levels from the proposed 2 no air source heat pumps to ensure any noise emitted from the system when operating does not cause nuisance to surrounding building users. This was undertaken in line with BS 4142 Guidance. The assessment assumes a worst-case approach with all heat pumps operating simultaneously at maximum load.

The BS4142 Assessment indicates that there will be a low impact on all noise sensitive receptors during the daytime and night time periods

- Daytime assessment indicates that there is likely a low impact on the noise sensitive locations as the specific sound is 20dB below the background levels and is lower than the residual sound.
- Night-time assessment indicates that there is likely a low impact on the noise sensitive locations as the specific sound is 20dB below the background levels and is lower than the residual sound.

7. Construction phase plan and potential disruption

The contract to carry out the proposed works has been awarded to Alternative Heat Ltd, and the project team has carried out a detailed risk assessment of the building specific risks that apply to the proposed works at the Rua Red building and surrounding area.

Mitigation measures have been put in place for each of the risks identified, and these measures are reflected in the Health and Safety Plan prepared by Alternative Heat Ltd. A summary of the main risks during the construction phase that have been identified and mitigation measures that have been put in place are outlined below.

Risk identified	**Mitigation measures in place**
Public safety risks from high pedestrian activity near council services, car parks, shops, public transport links and nearby facilities	Secure hoarding and fencing, clear warning signs, directional pedestrian signage, and a clean, organised site.
Traffic disruption and congestion affecting roads, car parks, staff, visitors and service users	Construction Traffic Management Plan, off-peak deliveries and heavy vehicle movements, alternative parking options, and maintained access routes.
Temporary restricted access to Rua Red building	Careful access planning, clear signage, communication with council staff and service users, and regular updates on planned works and timelines.
Noise and vibration affecting nearby residential areas, schools, offices, businesses and Civic Office operations.	Low-noise machinery, vibration-controlled equipment, restricted hours for high-noise activities, advance notice to affected parties, and regular noise/vibration monitoring.
Dust and air quality issues	Water suppression, dust extraction systems, covered skips and loose materials, regular cleaning of access roads, air quality monitoring, and corrective action where limits are exceeded
Emergency access restrictions for the Rua Red building and surrounding facilities	Emergency routes and hydrants kept clear and signposted, staff briefed on emergency procedures, and coordination with emergency services during works
Construction waste and debris causing pedestrian hazards, environmental damage or visual pollution	Waste segregation, safe storage and disposal, use of licensed waste carriers, regular waste removal, and maintaining a tidy site
Weather-related delays and hazards such as slippery surfaces, flooding or unsafe	Materials and equipment secured, anti-slip surfaces used, drainage provided to prevent

materials during windy conditions	pooling, and weather delays built into the project timeline
Reputational and community impact from poor communication or mismanagement of disruption	Regular communication with council staff, residents and businesses, clear timelines, public updates, and visible site contact information
Security and emergency preparedness risks due to high daily footfall and continuous public activity	Coordinated response planning, clear site controls, emergency access planning, and staff briefings

8. Timeline for implementation

It is anticipated that works will commence between September and December 2026, with some minor works potentially continuing into 2027. Disruption to building users during this period should be minimal as the majority of works will be concentrated in existing plantrooms, and outdoor areas. Where there is potential for disruptive levels of noise relating to the works, this will be communicated to building and facilities managers to ensure that works can be scheduled at times that minimise disruption to building users.

8. Schedule of Associated Drawings and Reports

Drawing Number	Drawing Title	Scale	Version
SDC2401-ALT-RAC-XX-PL-U-00006	Site Location Plan	1:1000	
SDC2401-ALT-RAC-XX-PL-U-00001	Rua Red- Site Plan	As indicated	P02
SDC2401-ALT- RAC-XX-PL-U-00002	Rua Red – ASHP General Arrangement Plan	1:50 at A1	P01
SDC2401-ALT- RAC-XX-PL-U-00003	Rua Red– ASHP Compound Renders	1:1 at A1	P01
SDC2401-ALT-RAC-XX-RP-Z-80011	Noise Impact Assessment Report		P02
P26147-FT-ENG-XX-RP-EN-0006	Report to Inform EIA Screening for Proposed Energy Works at the Rua Red, Tallaght, Dublin 24’		Rev 1
P26147-FT-ENG-XX-RP-EN-0012	Report to Inform Appropriate Assessment Screening for Proposed Energy Works at the Rua Red, Tallaght, Dublin 24’		Rev 1